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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,684	02/13/2004	Terry L. Gilton	M4065.0699/P699-B	5881
24998	7590	07/05/2005	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP			LEE, HSIEN MING	
2101 L Street, NW			ART UNIT	
Washington, DC 20037			PAPER NUMBER	
			2823	

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/777,684	Applicant(s) GILTON, TERRY L.	
	Examiner Hsien-ming Lee	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 64-80 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 64-80 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

HSIEN-MING LEE
PRIMARY EXAMINER

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>021304</u> | 6) <input type="checkbox"/> Other: ____ |

6/30/05

DETAILED ACTION

Claim Objections

1. Claim 64 is objected to because of the following informalities: the term "the voltage or current controlled resistance setable semiconductor material" (at lines 12-13) lacks antecedent basis. In addition, the term "sidewall" (line 8) should be -- sidewalls --.
2. Claim 68 is objected to because of the following informalities: the term "least possible distance" renders indefinite because the "possible distance" is not a well-defined term.
3. Claim 75 is objected to because of the following informalities: the term "a highest of selected setable states" (last line) should be -- a highest of selected **resistance settable** states --.
4. The word "setable" (claim 64, line 13; claim 69, lines 2 and 6; claim 70, line 2; claim 71, line 2; claim 72, line 2; claim 75, lines 2 and 6; claim 76, line 2; claim 77, line 2 and claim 78, line 2) should be -- settable --.

Double Patenting

5. Applicant is advised that should claims 69-74 be found allowable, claims 75-80 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The only difference between claim 69 and claim 75 is the preamble, in which claim 69 recites "A programmable memory cell", whereas claim 75 recites "A non-volatile resistance variable device." The claim body in claims 69 and 75 is substantially identical. The claim body in claim 75 does not further limit the preamble as to what features being included in the "non-

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volatile resistance variable device.” Also, the claim body in claim 69 does not further limit the preamble as to what features being included in the “programmable memory cell.” Thus, claim 75 is considered a duplicate claim to claim 69. In addition, claims 76-80 are identical to claims 70-74, respectively.

Allowable Subject Matter

6. Claims 64 and 69 would be allowable if rewritten or amended to overcome the objection, as set forth in this Office action.

7. Claims 65-68 are objected to as being dependent upon an objected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, Katti et al. to US 5,375,082, teach an analog memory device, comprising a substrate 12; a dielectric layer 22 over the substrate 12; a magnetoresistive material 14 capable of responding the change of resistance when a current passing through the magnetoresistive material 14 ; and an electrode layer 20.

In contrast, Katti et al. at least neither teach nor suggest an *opening* having sidewalls extending the dielectric layer to a *first electrode*, the sidewalls having at least one surface striation in a portion thereof; and a second electrode in electrical *connection with a voltage or current controlled resistance settable semiconductor material received within the opening*.

Katti et al. also neither teach nor suggest a programmable memory cell comprising a body, the body comprising a surface, the surface comprising at least one *surface striation*

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extending from proximate the one electrode to proximate the other electrode at least when the body of said material is in a highest of selected resistance settable states.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hsien-ming Lee whose telephone number is 571-272-1863. The examiner can normally be reached on Tuesday-Thursday (8:00 ~ 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hsien-ming Lee
Primary Examiner
Art Unit 2823

June 30, 2005

HSIEN-MING LEE
PRIMARY EXAMINER

6/30/2005